PENDING CLAIMS

1. (previously presented)   A method for identifying compatibility between two firmware images, comprising:

analyzing a control block of each of said firmware images, wherein each of said control blocks includes a firmware family code and a compatibility table of a firmware image associated with said control block;

determining if said firmware family codes of said firmware images are the same; and

in response to determining that said firmware family codes are different, considering said two firmware images to be incompatible unless a compatibility table entry indicates otherwise.

2. (original)   The method as recited in Claim 1, further comprising reporting said firmware images are not compatible if said family codes of said firmware images are not the same and said evaluation of said compatibility tables concludes that said firmware images are not compatible.

3. (original)   The method as recited in Claim 1, wherein said compatibility table includes at least one table entry, wherein said table entry is associated with a different firmware image.

4. (original)   The method as recited in Claim 3, wherein said table entry includes a family code and a stepping level of said different firmware image.

5. (original)   The method as recited in Claim 4, wherein said table entry further includes a relationship code that identifies whether a firmware image associated with said compatibility table can be utilized to replace a firmware belonging to a firmware family identified in said compatibility table.

6. (original)   The method as recited in Claim 5, wherein said relationship code includes a family relationship code and a stepping level relationship code.

7. (original)   The method as recited in Claim 6, wherein said family relationship code identifies which firmware family code is compatible with said firmware image associated with said compatibility table.

8. (original)   The method as recited in Claim 6, wherein said stepping level relationship code identifies which stepping levels can replace or be replaced with said firmware image associated with said compatibility table.

9. (original)   The method as recited in Claim 1, wherein each of said control block further includes a stepping level of an associated firmware image.

10. (original)   The method as recited in Claim 1, wherein each of said control blocks is resident in an associated firmware image.

11. (original)   The method as recited in Claim 1, wherein each of said control blocks is not resident in an associated firmware image and accessed utilizing a software application interface (API).

12-18. (cancelled)

19. (previously presented)   The method as recited in claim 1, wherein said two firmware images include an original firmware image and a replacement firmware image, and wherein said firmware images are directly deemed compatible if said replacement firmware image can replace said original firmware image without causing an error when said replacement firmware is executed.

20. (previously presented)   A computer-readable medium having stored thereon computer executable instructions for implementing a method for identifying compatibility between firmware images, said computer executable instructions when executed perform the steps of:

analyzing a control block of each of said firmware images, wherein each of said control

blocks includes a firmware family code and a compatibility table of a firmware image

associated with said control block;

determining if said firmware family codes of said firmware images are the same; and

in response to determining that said firmware family codes are different, considering said

two firmware images to be incompatible unless a compatibility table entry indicates

otherwise.

21. (original) The computer-readable medium as recited in Claim 20, wherein said computer

executable instructions further comprising reporting said firmware images are not compatible if

said family codes of said firmware images are not the same and said evaluation of said

compatibility tables concludes that said firmware images are not compatible.

22. (original) The computer-readable medium as recited in Claim 20, wherein said

compatibility table includes at least one table entry, wherein said table entry is associated with a

different firmware image.

23. (original) The computer-readable medium as recited in Claim 22, wherein said table entry

includes a family code and a stepping level of said different firmware image.

24. (original) The computer-readable medium as recited in Claim 23, wherein said table entry

further includes a relationship code that identifies whether a firmware image associated with said

compatibility table can be utilized to replace a firmware belonging to a firmware family

identified in said compatibility table.

25. (original) The computer-readable medium as recited in Claim 24, wherein said relationship

code includes a family relationship code that identifies which firmware family code is

compatible with said firmware image associated with said compatibility table.

26. (original) The computer-readable medium as recited in Claim 24, wherein said relationship code includes a stepping level relationship code that identifies which stepping levels can replace or be replaced with said firmware image associated with said compatibility table.

27. (original) The computer-readable medium as recited in Claim 20, wherein each of said control block further includes a stepping level of an associated firmware image.

28. (previously presented)   A data processing system, comprising:

a processor;

a non-volatile memory, coupled to said processor;

a firmware image resident in said non-volatile memory; and

a firmware family control block, wherein said firmware family control block is associated with said firmware and includes:

a firmware family code of firmware images, wherein each said firmware family code uniquely identifies a product family of a firmware image; and

at least one compatibility table entry,

wherein, in response to determining that said firmware family codes are different, considering said firmware images to be incompatible unless a compatibility table entry indicates otherwise.

29. (original) The data processing system as recited in Claim 28, wherein said firmware family control block further includes a firmware stepping level of said firmware image.

30. (original) The data processing system as recited in Claim 28, wherein said non-volatile memory is a programmable read only memory (PROM).

31. (previously presented)   The data processing system as recited in Claim 28, wherein said non-volatile memory device is an electrically erasable programmable read only memory (EEPROM).

32. (original) The data processing system as recited in Claim 28, wherein said compatibility table entry includes a relationship code that describes a relationship between said firmware image and other firmware images which may be compatible with said firmware image.

33. (original) The data processing system as recited in Claim 28, wherein said compatibility table entry includes a family relationship code that identifies a firmware family code of at least one other firmware image which may be compatible with said firmware image.

34. (original) The data processing system as recited in Claim 28, wherein said compatibility table includes a stepping level relationship code that identifies which stepping levels can replace or be replaced by said firmware image.

35. (previously presented)   A method for upgrading an installed firmware with a candidate firmware, comprising:

 determining if each of said installed and candidate firmwares has a control block, wherein each of said control blocks includes a firmware family code, firmware stepping level and compatibility table of an associated firmware;

 acquiring firmware family codes and firmware stepping levels of said installed and candidate firmwares in response to said determination that both of said installed and candidate firmwares have a control block, wherein each said firmware family code uniquely identifies a product family of a firmware image;

 comparing said family codes and said stepping levels of said installed and candidate firmwares; and

 determining if said installed and candidate firmwares are compatible utilizing said compatibility tables in response to said family codes and said stepping levels of said installed and candidate firmwares not matching; and

 in response to determining that said installed firmware does not have a firmware family control block that includes a firmware family code, firmware stepping level and compatibility table for said installed firmware, causing a flash utility to refuse to install said candidate firmware.

36. (cancelled)

37. (original) The method as recited in Claim 35, further comprising overwriting said installed firmware with said candidate firmware in response to said determination that said installed and candidate firmwares are compatible.

38. (original) The method as recited in Claim 35, further comprising reporting said installed firmware with said candidate firmware are incompatible in response to said determination that said installed and candidate firmwares are not compatible.

39. (original) The method as recited in Claim 35, wherein said compatibility table includes at least one table entry, wherein said table entry is associated with a different firmware.

40. (original) The method as recited in Claim 39, wherein said table entry includes a family code and a stepping level of said different firmware.

41. (original) The method as recited in Claim 40, wherein said table entry further includes a relationship code that identifies whether a firmware associated with said compatibility table can be utilized to replace a firmware belonging to a firmware family identified in said compatibility table.

42. (original) The method as recited in Claim 41, wherein said relationship code includes a family relationship code that identifies which firmware family code is compatible with said firmware associated with said compatibility table.

43. (original) The method as recited in Claim 41, wherein said relationship code includes a stepping level relationship code that identifies which stepping levels can replace or be replaced with said firmware associated with said compatibility table.

44. (previously presented)   A computer-readable medium having stored thereon computer executable instructions for implementing a method for upgrading an installed firmware with a candidate firmware, said computer executable instructions when executed perform the steps of:

determining if each of said installed and candidate firmwares has a control block, wherein each of said control blocks includes a firmware family code, firmware stepping level and compatibility table of an associated firmware;

acquiring firmware family codes and firmware stepping levels of said installed and candidate firmwares in response to said determination that both of said installed and candidate firmwares have a control block, wherein each said firmware family code uniquely identifies a product family of a firmware image, and wherein the product family is defined as a set of products that utilizes a same firmware that allows unrestricted changes from one revision level of said firmware image to another revision level of said firmware image;

comparing said family codes and said stepping levels of said installed and candidate firmwares; and

determining if said installed and candidate firmwares are compatible utilizing said compatibility tables in response to said family codes and said stepping levels of said installed and candidate firmwares not matching.

45. (original) The computer-readable medium as recited in Claim 44, wherein said computer executable instructions further comprising utilizing legacy methods for determining if said installed and candidate firmwares are compatible in response to said determination that said installed firmware does not have a control block.

46. (original) The computer-readable medium as recited in Claim 44, wherein said computer executable instructions further comprising overwriting said installed firmware with said candidate firmware in response to said determination that said installed and candidate firmwares are compatible.

47. (original) The computer-readable medium as recited in Claim 44, wherein said computer executable instructions further comprising reporting said installed firmware with said candidate

firmware are incompatible in response to said determination that said installed and candidate firmwares are not compatible.

48. (original) The computer-readable medium as recited in Claim 44, wherein said compatibility table includes at least one table entry, wherein said table entry is associated with a different firmware.

49. (original) The computer-readable medium as recited in Claim 48, wherein said table entry includes a family code and a stepping level of said different firmware.

50. (original) The computer-readable medium as recited in Claim 49, wherein said table entry further includes a relationship code that identifies whether a firmware associated with said compatibility table can be utilized to replace a firmware belonging to a firmware family identified in said compatibility table.

51. (original) The computer-readable medium as recited in Claim 50, wherein said relationship code includes a family relationship code that identifies which firmware family code is compatible with said firmware associated with said compatibility table.

52. (original) The computer-readable medium as recited in Claim 50, wherein said relationship code includes a stepping level relationship code that identifies which stepping levels can replace or be replaced with said firmware associated with said compatibility table.

53. (previously presented)   The method as recited in Claim 35, further comprising:

in response to determining that said candidate firmware is desired to replace said installed firmware that does not have said firmware family control block, issuing an override command from said flash utility to override said refuse to install command, wherein said candidate firmware flashes over said installed firmware despite said installed firmware lacking said firmware family control block.

54. (previously presented)   The method of Claim 1, wherein said method for identifying compatibility between two firmware images is performed in response to an electronic device having undergone a design upgrade that incorporates new components.